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- (71) Applicant (for all designated States except US): **IRMLLC**  
[US/US]; Sophia House, 48 Church Street, P.O. Box HM  
2899, HM LX Hamilton (BM).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **PETERS, Eric, C.**  
[US/US]; 3381 Calle del Sur, Carlsbad, CA 92009 (US).  
**BROCK, Ansgar** [DE/US]; 10847 Caminito Alto, San  
Diego, CA 92131 (US). **ERICSON, Christer** [SE/US];  
Apt. 1428, 7548 Charmant Drive, San Diego, CA 92122  
(US).
- (74) Agents: **SNYDER, Joseph, R.** et al.; Townsend and  
Townsend and Crew LLP, Two Embarcadero Center,  
Eighth Floor, San Francisco, CA 94111 (US).
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(54) Title: LABELING REAGENT AND METHODS OF USE

(57) **Abstract:** The present invention provides compounds which are useful as multifunctional labels in proteomics studies. The labels of the present invention are both lysine specific and increase the overall sequence coverage obtained in polypeptide mapping experiments, by for example, increasing the ionization efficiencies of lysine-terminated tryptic fragments. In certain aspects, the labels of the present invention can be used to measure differential quantitation, as for example, deuterium(s) can easily be introduced during their synthesis. In one aspect, a C-terminal derivatized lysine biases the fragment ion intensities strongly toward C-terminal fragment ions, resulting in a highly simplified tandem mass spectrum. In further aspects, the number of lysine residues can be determined in a polypeptide.



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# INTERNATIONAL SEARCH REPORT

International application No.

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b>												
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<b>B. FIELDS SEARCHED</b>												
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CAS Online, WEST												
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>												
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
A	US 6,271,037 A (CHAIT et al) 07 August 2001 (07.08.2001), see entire document.	1-53										
A, E	US 6,489,608 A (SKILLING et al) 03 December, 2002 (03.12.2002), see entire document.	1-53										
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.												
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230		Authorized officer David Lukton <i>Valerie Bell-Harris for</i> Telephone No. 703-308-0196										